PROFI TAP

Industrial Ethernet Protocol Analyzer

User Manual

C1AP-100

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PROFI TAP C1AP-100 *User Manual*

1. General Information

The Profi-TAP is a straight forward solution. In-Line it sees and monitors all 7 protocol layers. It captures and merges Full-Duplex traffic at Wire-Speed (200Mb). It requires only one USB 2.0 (480Mb) port. It is a cost-effective, ultra compact, easy to use solution. The hardware setup takes less than a minute.

Profi-TAP is invisible to the network and does not interfere in auto negotiation/ speed or duplex settings. The Permanent Network Link feature guarantees permanent network connectivity and no package loss, also when power fails or the USB port is disconnected. One LED shows Power, two LEDs shows Link/Activity, two more CRC Errors on monitored link.

Profi-TAP is designed to work with 3rd party software like Wireshark/Ethereal, Optiview, Etherpeek, etc. The USB Key holds the necessary drivers and powerful analysis software.

Due the design of Profi-TAP, unlike ordinary NIC's, it passes on information about MAC Level faults like CRC, etc..

There are several ways to indicate this kind of errors - via LEDs on the front of Profi-TAP panel, via the Statistic Tool or with the used analyzer.

2. Getting started

Unpacking the device you will find the following components :

Profi Tap C1AP-100

USB Key with Drivers & Analyzer Software

Statistic Tool (on USB Key)

1* USB Cable, 0,8 mtr.

2* RJ45 Patch Cable, 2 mtr.

pouch for protection

2. Overview

2.1 Interface Connectors

There are 2 RJ45 ports, Port A and B, connected to the network, and 1 USB connector to the Analyzer.

2.2 Link/Activity

Two "Link/Act" LEDs indicate Link (on) and Activity (blink).

2.3 Errors

Two "Error" LEDs indicate CRC errors (flashing/on) on the network link.

front view

2.4 Power

The rear Power LED is on if USB Port is connected

In case of a Power Failure the uninterrupted link in the network guarantees permanent network connectivity, also when USB port is not connected.

rear view

3. Installation

a. Insert the USB-Key for accessing/copying the contents to a installation folder.

Note : It is recommended to copy the contents to your harddisk first, if there is no more other USB2.0 port available. After copying you may disconnected the USB Key and proceed. Otherwise use the USB-Key for installation procedure and decide to connect Profi-TAP to a second USB2.0 port and remove USB-Key when finished.

b. Connect the Tap to Network

Connect into the network using Category 5 UTP cables.

Network Port A : to DCE by straight Cable / to DTE by cross-over cable.
Network Port B : to DTE by straight Cable / to DCE by cross-over cable.
The maximum distance between any of the connected devices is 90mtr.

c. Connect the USB port

Connect the USB port to a free PC/MAC USB2.0 port, the Power LED lights.

d. Install the Driver

Install the driver according to your Operating System. Current available drivers are located on the USB-Key at the driver section or within your installation folder on your harddisk.

Supported OS are :
Windows ME/98/CE 5.0
Windows XP/2000/Vista 32-bit
Windows XP/2003/Vista 64-bit
MAC OS X 32-bit/64-bit/x86/PowerPC
Linux kernel 2.6.0 ~ 2.6.13
Linux kernel 2.6.14 ~ 2.6.22

Please check the last driver releases for your Operating System on section "Downloads" at www.profitap.com

e. Setup the TAP Network Card

In any case we recommend to set an IP address. The installed TAP driver (as under section d.) is represent as a Network Interface Device to your PC. Configure the IP Protocol Stack :

IP address :   **192.168.0.1**
Submask :   **255.0.0.0**

Note : Leave Gateway or DNS Settings undefined.

Profi-TAP is now ready to use as source for your installed analyzer or for use with the Statistic Tool (see next page to connect to an analyzer)

4. Usage with an Analyzer

f. Selecting Profi-TAP as source for your Analyzer

Start your existing analyzer and select the new virtual driver appearing at the "select NIC" window, refer to your Analyzer's Manual or User Help about how to select a Network Card

g. Using alternate Wireshark/ Etherreal

As one option you may install an alternate Analyzer from USB-Key as provided or from various other sources :

Note : Always follow the specific instructions shown by the installation wizard of the selected Analyzer

In addition perform step *f.* to enable Profi-TAP to be you favourite resource.

Verify the listing on our website regarding supported Analyzers. Make shure to use latest available version if any problem occurs with Profi-TAP.

5. Installation Statistic Tool

h. Install "Statistics Tool" (optional)

Using the Statistics Tool requires the installation of a Java based application located on the USB-Key or your installation folder on your local hard disk.

Copy the folder "Statistics Tool" with its subdirectories to a location on your harddisk.

Using the Statistics Tool requires the installation of a Java based application located on the USB-Key or your installation folder on your local hard disk.

Locate the folder "Statistics Tool" on USB Key or your installation folder on the harddisk.

If you downloaded the latest version from the website, **unzip** the downloaded file **jpnstat.zip or .rar** to the selected folder.

Note : The Statistic Tool requires Java Runtime Environment installed on your PC. Java Runtime is available as free download for various Operating systems at www.java.com

Refer Usage of Statistic Tool on next page.
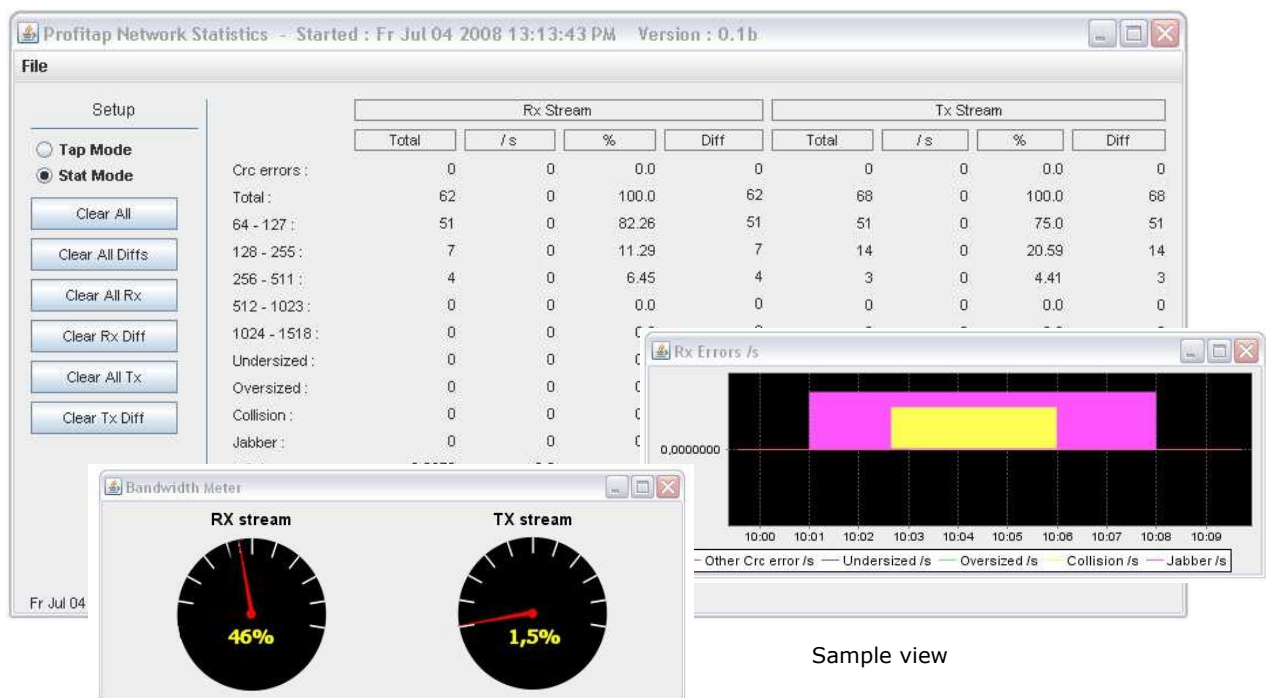
6. Usage of Statistic Tool

The Statistic Tool is a stand alone application designed for Profi-TAP.

In addition to the display of CRC faults via LED on the front of Profi-TAP device you will get detailed information about RX and TX lines of the monitored link with the Statistic Tool

Once Profi-TAP is connected to the Network and the USB2.0 port it will monitor all 7 layers at the link. To display the traffic in a listing or graphical chart you need to run this Java application as prior installed under section 5.

The Stat Mode uses the TAP exclusively by default, for using the native Tap Mode for analyzer toggle between Modes by selecting the checkbox Stat- or TAP-Mode

Locate the executable file *JPNstat.jar* in the folder "Statistics Tool" or any other defined location as installed. Double-click on *JPNstat.jar* to execute the application in a upcoming window :

Sample view

As an overview without any Analyzer this troubleshooting tool will identify in one quick view the bandwidth or any low layer faults by chart or graph prior to a deeper investigation performed by an analyzer.

Note : Make shure that the Operating System associates the extension *.jar to Java. An undefined error may occur if any other program will execute this file.

7. additional information

Connectors	2 x RJ45, 8 pins 1 x USB Type B
Power	5V over USB / 300mA
Latency	Network : 0ns Monitor : 1 packet length
Dimensions:	24 x 55 x 102mm
Operation	0 to 50 °C
Storage Temperature	-22 to 70 °C
Relative Humidity	10 to 90%, no condensing
Compliance	CE, FCC class A

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